

## Appendix 2

### Percent Identity

	1	2	3	4	5	6	7	
1	■	59.0	65.9	31.5	57.4	28.2	74.5	1
2	53.3	■	80.5	33.9	74.7	30.8	65.3	2
3	41.2	22.1	■	26.8	93.6	22.7	68.2	3
4	140.9	125.1	146.4	■	32.7	53.8	30.7	4
5	55.0	28.9	4.3	135.5	■	31.9	63.3	5
6	149.4	133.7	158.0	64.2	126.9	■	24.8	6
7	23.7	46.4	38.2	143.7	44.8	155.4	■	7
	1	2	3	4	5	6	7	

BB1085 SEQ ID NO:10

BB1085 SEQ ID NO:8

BB1085 SEQ ID NO:12

BB1085 SEQ ID NO:14

BB1085 SEQ ID NO:16

BB1085 SEQ ID NO:18

BB1085 SEQ ID NO:20

Divergence

E

	10	20	30	40	50	60
1	MGSTTMSPPSF	VVLLLL	LLATIAAAGS	NMDEEV	DDLQYLID	NSDDIPTNDPDGWPE
1	8--EEDDAA	-----	GASAH	-----	RHLPDF	-----
1	A--RV	-----	-----	-----	-----	-----
1	-----	-----	-----	-----	-----	-----
1	-----	-----	-----	-----	-----	-----
1	M--RILVVL	SLATLL	FFSSLFL	TLCDLTD	-----	EDLGFL
1	-----	-----	-----	-----	-----	-----
1	-----	-----	-----	-----	-----	-----
1	-----	-----	-----	-----	-----	-----

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	70	80	90	100	110	120
60	GDYDDDDLL	FQDQDQ	DLTGH	-QPEI	DETHVV	VVLAANFSSFLASSHHVMVEF
29	EDF-GDFSD	FEDSDA	DRDEYK	APVDEK	DVVVLKEG	NFSDFVEKNRFVMVEF
4	-----	-----	-----	-----	-----	-----
2	-----	-----	-----	-----	-----	-----
45	GHYHDDDA	NFGDFE	EDPEAY	KQPEV	DEKDVV	ILKEKNFTDTVKS
12	-----	-----	-----	-----	-----	-----
1	-----	-----	-----	-----	-----	-----

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	130	140	150	160	170	180
119	GLSRRRAH	LA	STNQPR	PNFA	AKV	DA
88	AA	TE	KK	EE	-----	-----
4	-----	-----	-----	-----	-----	-----
2	-----	-----	-----	-----	-----	-----
105	AA	TE	KK	EE	-----	-----
20	AA	TE	KK	EE	-----	-----
1	-----	-----	-----	-----	-----	-----

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Handwritten mark resembling a stylized 'E' or 'F'.

179	IN	MA	RT	KE	AV	D	M	N	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A			
142	P	O	R	T	K	D	A	T	M	I	K	K	I	G	I	G	I	N	I	S	E	D	E	R	I	T	S	E	T	K	V	V	A	C	I	N	S	I	V	P	E	N	E	L	A	N	A		
4																																																	
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159	IN	Q	R	T	K	E	A	V	D	M	N	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A
76	CH	L	H	K	O	A	E	V	T	V	R	K	T	C	E	P	I	R	L	Q	S	K	D	S	E	E	F	K	K	D	M	T	F	I	E	L	F	K	N	E	E	A	D	H	E	F	V	K	A
1																																																	

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239	BR	U	P	D	S	I	N	E	T	S	T	P	D	V	A	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A
202	S	R	A	T	D	N	E	T	K	E	A	V	D	M	N	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A
4																																																					
2																																																					
219	SR	U	P	D	S	I	N	E	T	S	T	P	D	V	A	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A
136	ATT	D	N	E	T	K	E	A	V	D	M	N	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A			
1																																																					

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299	SK	F	R	L	V	T	K	E	A	V	D	M	N	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A
262	SK	F	R	L	V	T	K	E	A	V	D	M	N	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A
4																																																			
2																																																			
279	SK	F	R	L	V	T	K	E	A	V	D	M	N	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A
196	SK	F	R	L	V	T	K	E	A	V	D	M	N	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A
15	SK	F	R	L	V	T	K	E	A	V	D	M	N	K	L	C	P	A	V	Q	V	T	V	D	E	A	Q	S	T	T	G	D	D	A	V	A	F	L	D	T	L	S	C	A	H	D	E	L	A	N	A

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*[Handwritten mark]*

359	DS	BE	VE	CE	PA	AD	Y	T	Q	E	T	W	A	T	E	N	T	D	A	R	K	F	F	D	D	E	S	L	E	A	K	D	A	G	T	R	D	K	I	T	P	
322	DN	EV	GC	PA	BE	Y	T	Q	E	T	W	A	T	E	N	T	D	A	R	K	F	F	D	D	E	S	L	E	A	K	D	A	G	T	R	D	K	I	T	P		
6	DN	EV	GC	PA	BE	Y	T	Q	E	T	W	A	T	E	N	T	D	A	R	K	F	F	D	D	E	S	L	E	A	K	D	A	G	T	R	D	K	I	T	P		
62	ND	EN	LA	FF	LT	L	GG	LE	ES	KN	T	V	A	A	F	D	A	M	S	S	Y	L	E	T	K	P	Q	S	N	L	E	E	C	N	N	L	V	Q	S	I	S	Y
339	DN	EV	GC	PA	BE	Y	T	Q	E	T	W	A	T	E	N	T	D	A	R	K	F	F	D	D	E	S	L	E	A	K	D	A	G	T	R	D	K	I	T	P		
256	AE	N	LA	FF	LT	L	GG	LE	ES	KN	T	V	A	A	F	D	A	M	S	S	Y	L	E	T	K	P	Q	S	N	L	E	E	C	N	N	L	V	Q	S	I	S	Y
75	DN	EV	GC	PA	BE	Y	T	Q	E	T	W	A	T	E	N	T	D	A	R	K	F	F	D	D	E	S	L	E	A	K	D	A	G	T	R	D	K	I	T	P		

419	Y	K	S	E	P	V	S	N	O	E	D	V	K	V	V	G	D	N	R	T	T	K	D	V	I	L	I	N	A	T	C	G	C	S	L	E	E	T	N	N	L	A	K	E	R		
382	Y	K	S	E	P	V	S	N	O	E	D	V	K	V	V	G	D	N	R	T	T	K	D	V	I	L	I	N	A	T	C	G	C	S	L	E	E	T	N	N	L	A	K	E	R		
66	Y	K	S	E	P	V	S	N	O	E	D	V	K	V	V	G	D	N	R	T	T	K	D	V	I	L	I	N	A	T	C	G	C	S	L	E	E	T	N	N	L	A	K	E	R		
122	F	K	S	Q	I	D	N	T	E	S	S	H	I	V	G	T	D	E	I	S	S	E	K	T	V	F	T	M	I	N	E	T	S	K	Q	V	E	K	A	K	E	R					
399	Y	K	S	E	P	V	S	N	O	E	D	V	K	V	V	G	D	N	R	T	T	K	D	V	I	L	I	N	A	T	C	G	C	S	L	E	E	T	N	N	L	A	K	E	R		
316	H	K	S	E	L	Q	E	K	-	L	I	E	K	V	G	T	D	E	S	S	V	E	S	H	Q	N	F	L	V	H	T	M	C	V	D	E	I	S	K	N	V	E	K	A	K	E	R
135	Y	K	S	E	P	V	S	N	O	E	D	V	K	V	V	G	D	N	R	T	T	K	D	V	I	L	I	N	A	T	C	G	C	S	L	E	E	T	N	N	L	A	K	E	R		

479	SV	DS	LV	AK	MD	CT	NE	EP	AK	KS	DE	Y	RI	I	DE	PA	CK	K	S	E	F	E	E	G	E	R	I	V	D	U	K	T	A	K	E	R									
442	CT	DS	LV	AK	MD	CT	NE	EP	AK	KS	DE	Y	RI	I	DE	PA	CK	K	S	E	F	E	E	G	E	R	I	V	D	U	K	T	A	K	E	R									
126	NT	DS	LV	AK	MD	CT	NE	EP	AK	KS	DE	Y	RI	I	DE	PA	CK	K	S	E	F	E	E	G	E	R	I	V	D	U	K	T	A	K	E	R									
182	SS	N	I	F	R	I	ASA	N	E	E	I	K	L	O	V	N	D	Y	P	T	L	R	A	D	D	KA	-	N	E	K	I	S	K	S	S	L	K	E	A	A	S	N	Y	V	
459	NT	DS	LV	AK	MD	CT	NE	EP	AK	KS	DE	Y	RI	I	DE	PA	CK	K	S	E	F	E	E	G	E	R	I	V	D	U	K	T	A	K	E	R									
375	GS	N	I	K	F	R	I	ASA	N	E	E	I	K	L	O	V	N	D	Y	P	T	L	R	A	D	D	KA	-	N	E	K	I	S	K	S	S	L	K	E	A	A	S	N	Y	V
195	CT	DS	LV	AK	MD	CT	NE	EP	AK	KS	DE	Y	RI	I	DE	PA	CK	K	S	E	F	E	E	G	E	R	I	V	D	U	K	T	A	K	E	R									

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